

## **STAFF REPORT**

### **CALVERAS COUNTY WATER DISTRICT SADDLE CREEK GOLF COURSE, L.P., AND COPPER COVE WASTEWATER RECLAMATION PLANT CALAVERAS COUNTY**

A new NPDES Permit for the Calaveras County Water District Wastewater Reclamation Plant is being considered for adoption.

#### **BACKGROUND**

The Calaveras County Water District (CCWD) owns and operates a wastewater collection, treatment and disposal system that provides sewerage services to the Copperopolis Development Area (Copper Cove Sub-Division). Currently, CCWD operates a secondary wastewater treatment plant with a design capacity of 0.2 million gallons per day (MGD). After treatment, the disinfected secondary treated effluent is pumped to a storage reservoir for subsequent irrigation and restricted reclamation to a designated woodlands area on the District's property during the summer months. This existing discharge is regulated by Waste Discharge Requirements Order No. 5-00-136.

The existing effluent storage and land disposal facilities are inadequate to prevent treated wastewater from overflowing the storage reservoir during intense rainfall events or very wet precipitation years. Due to the unique foothill location, additional land is not available for expansion of the storage reservoir or land disposal area. As a result, CCWD is proposing to extract secondary wastewater from the storage pond and treat it to a tertiary level acceptable for CCR Title 22 recycling on the Saddle Creek Golf Course (SCGC). This tertiary treatment facility will have a design capacity of 0.95 MGD and will utilize a UV disinfection process. After tertiary treatment and disinfection, wastewater would then be recycled on the SCGC during the irrigation season (1 April through 31 December), and used as make-up water for an adjoining jurisdictional wetlands, which is regulated by the US Army Corps of Engineers (Clean Water Act 404 Conditional Use Permit No.199100807).

CCWD has applied for a NPDES permit to encompass incidental runoff associated with the seasonal recycled water application to the SCGC and the direct discharge to the jurisdictional wetlands. Currently, the source of SCGC irrigation water and wetlands make-up water is surface water from Lake Tulloch. This proposed recycling method would replace the use of surface water from Lake Tulloch, maximize the land disposal of tertiary treated wastewater, and significantly reduce the threat of uncontrolled release of wastewater to surface waters.

This proposed new permit establishes requirements for the treatment and discharge of reclaimed wastewater directly to SCGC, and for the direct discharge of make-up water to the jurisdictional wetlands. This proposed new permit includes technology and water quality based effluent limitations at the point of discharge from the tertiary treatment

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facility to the golf course irrigation water storage pond (NC-2D). Water quality based effluent limitations for ammonia, aluminum, chloroform, electrical conductivity (EC), iron, manganese, dichlorobromomethane, and dibromochloromethane are included in this permit. Where appropriate, schedules for compliance with these effluent limitations have been placed in the permit. Where effluent limitations are based on existing numeric or narrative Basin Plan standards, schedules for compliance have been established in a separate Time Schedule Order (TSO).

During precipitation events, runoff from the Golf Course and the jurisdictional wetlands flows to Littlejohns Creek. This permit establishes receiving water monitoring locations in Littlejohns Creek upstream and downstream of all incidental runoff locations, and includes receiving water limitations within Littlejohns Creek.

The 404 Permit requires that all ponds and wetland areas have a continuous supply of water to maintain minimum water levels in the Golf Course ponds and for downstream flows. The 404 Permit has designated some of the wetland systems as final, protected habitat areas, and some of the wetland systems for "cleansing" purposes. The 404 Permit also requires construction of the Golf Course receiving pond detention system in such a manner as to keep the water levels within certain wetlands limits. The 404 Permit prohibits the SCGC from draining golf course receiving ponds down to prevent reclaimed wastewater stored in the wetlands from overflowing during rainfall events.

The SCGC and the CCWD are hereafter referred to as Discharger.

## **TREATMENT AND DISPOSAL FACILITY DESCRIPTION**

Copper Cove Wastewater Reclamation Plant has a design treatment capacity of 0.2 million gallons per day (mgd) secondary and 0.95 mgd tertiary. The current annual average daily flow to the plant is 0.2 mgd and the daily peak wet weather flow is around 0.41 mgd. The treatment system consists of a headworks/flow diverter, two aerated ponds (Ponds 1&2) operated in series, followed by a non-aerated pond (Pond 4). Treated secondary wastewater is stored in Pond No. 6 for subsequent irrigation on-site on CCWD's 25 acres of spray irrigation fields. Wastewater to be reclaimed on the SCGC is further treated to tertiary levels by utilizing wastewater stored in Pond 6 and further processing it with the use of a Microfloc, coagulation-flocculation, and two-stage filtration system. Hypochlorite is added for disinfection and to control algae. A minimum of 90 minutes of chlorine contact time is achieved by the use of a 38 foot diameter (141,000-gallon) reclaimed water storage tank and in the wastewater conveyance pipe transporting the tertiary wastewater to the SCGC storage pond. Under the proposed WWTP improvements, a 0.95 mgd capacity UV disinfection system is scheduled to replace the existing chlorination facility by the end of Summer 2006.

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**JUSTIFICATION FOR BENEFICIAL USES OF RECEIVING WATER**

The receiving stream is Little Johns Creek, which is tributary to the Delta via San Joaquin River. The beneficial uses that currently apply to the San Joaquin River and Delta are municipal and domestic supply; agricultural supply, including stock watering; industrial service supply; industrial process supply; navigation; hydropower generation; water contact recreation, including canoeing and rafting; non-contact water recreation, aesthetic enjoyment, warm freshwater habitat; cold freshwater habitat; warm migration of aquatic organisms; cold migration of aquatic organisms; warm spawning, reproduction, and/or early development; cold spawning, reproduction, and /or early development; and wildlife habitat. These beneficial uses apply to jurisdictional wetlands and Little Johns Creek through the 'Tributary Rule'.

**COMMENTS:**

Comments on the tentative permit and TSO were received from the California Sportfishing Protection Alliance (CSPA), Stockton East Water District, and CCWD. The most significant comments, and responses to those comments, are summarized below. Based upon these comments changes were made to both the proposed permit and TSO. Redline/strikeout versions of these documents will be made available to any interested person who requests a copy.

**DISCHARGER'S COMMENTS**

Staff has met with the Discharger on three separate occasions (20 April, 8 May, and 12 July, 2006) to discuss the Discharger's concerns with the proposed Order. The Discharger stresses that it currently does not have sufficient land for disposal of effluent originating within the District and it is obligated to plan for providing sewer service year around. Since suitable private land is not available except through condemnation, lawful discharge to Saddle Creek Golf Course and subsequent runoff into jurisdictional wetlands and Littlejohns Creek (through exercising this NPDES permit) is the only means available to them.

A summary of their concerns raised during the first two meetings is included in the agenda package (May 5, 2006 and June 30, 2006 letters from Mr. Fred Burnett, Discharger). All of their concerns either have been addressed and/or incorporated into the proposed Order,

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**STAKE HOLDERS' COMMENTS**

Stockton East Water District's (SEWD) issues of concern:

SEWD commends the Discharger and the Regional Board for the proposed permit that is responsible and provide creative solution for reuse, recycling, and protection of downstream beneficial uses of the receiving water. SEWD's only concern is that they would like to be noticed of unusual monitoring results or any spills that may occur from the facility. The Discharger has agreed to comply with SEWD's request. Comment letter is attached to the agenda package.

California Sport Fishing Protection Allinace (CSPA)

CSPA objects to granting an NPDES permit without the following revisions in the permit:

CSPA commented that the tentative permit did not include effluent limitations for chlorine and tri-halomethanes (THMs) for the effluent disinfected with the UV system. CSPA contends that in addition to disinfection with UV, chlorine is commonly used in wastewater treatment as part of filter backwashing and to maintain a potable water chlorine residual up to the tap. Therefore, the use of UV for disinfection may not eliminate the formation and discharge of THMs in the effluent. The proposed permit was modified to include effluent limitations for chlorine and THMs.

CSPA commented that the effluent limitation for electrical conductivity of 900  $\mu\text{mhos/cm}$  is not protective of agricultural uses and should be revised considering the agricultural goal of 700  $\mu\text{mhos/cm}$ . The proposed new permit establishes a final EC limit of 900  $\mu\text{mhos/cm}$  considering the MUN beneficial use and the 'recommend level' (most stringent) secondary maximum contaminant level. Currently there is there is no information on downstream agricultural uses that may be influenced by the discharge, and there is insufficient information to determine whether effluent EC levels could cause or contribute to a violation of a water quality standard considering the AGR beneficial use. This Order requires the Discharger to conduct a site specific study which identifies downstream agricultural and municipal supply uses, and assess the impact of the discharge on background water quality and their uses. The findings of this study shall be used to determine whether the final effluent limitations for EC should be adjusted up or down considering site specific conditions and the potential and/or existing beneficial uses of the receiving water.

CSPA commented that the proposed permit is a new NPDES permit for a new discharger to surface water and hence, compliance schedules are not allowed and must be removed from the permit. CCWD is not a new discharger to surface water. The treatment plant has been in existence for several years and currently regulated

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by Waste Discharge Requirements Order No. 5-00-136. In addition, a temporary NPDES permit Order No. 5-00-170 was issued in June 2002 and later rescinded in June 2003.

CSPA comment letter is attached to the agenda package.

## **SUMMARY**

The Tentative Order was distributed for public review on 26 May 2006. Comments were received from the Discharger, Stockton East Water District and the California Sport Fishing Protection Alliance. All comment letters and staff's response to comments are included in the Board's agenda package. Based on the comments received the Order was modified. The California Sport Fishing Protection Alliance expressed their intent to contest this item. The staff will respond to any new comments on the revised Tentative Order in writing prior to the Board meeting and will address all major issues during the presentation.

## **REQUIREMENTS OF THE PROPOSED ORDER**

- Effluent limitations contained in the Order are protective of the receiving water for all existing, probable, and future beneficial uses.
- The Order requires the Discharger to conduct additional monitoring for constituents; *aluminum, ammonia, fluoride, chloroform, electrical conductivity, mercury, MBAS, dibromochloromethane, dichlorobromomethane, and tributyltin* with a re-opener provision should monitoring results indicate that the discharge has the reasonable potential to cause an exceedance of water quality criteria of the receiving water.
- The Order limits the effluent discharge from pond NC-2D into jurisdictional wetlands only when necessary, to provide makeup water to comply with 404 Permit.
- The Order prohibits direct discharge into Littlejohns Creek.
- The Order permits tertiary treated wastewater discharge to Saddle Creek Golf Course Pond or the jurisdictional wetlands only from January 1 to March 31.

## **RECOMMENDATION**

Adopt the proposed NPDES permit and Time Schedule Order